

University of California Irvine Faculty Development Program

Executive Summary:

Funds are requested for a research project led by a junior faculty member under the mentorship of a senior colleague. Funds will cover research expenditures, travel to meetings, stipend and fees for one graduate student researcher and equipment for the project and for teaching. Matching funds from the PI's organization will be used for equipment and for summer programs for undergraduate and first year graduate students. During the course of this project we will:

1. Study and test new approaches of separation and isolation of lanthanides for advanced nuclear fuel cycles and for production of high specific activity radiolanthanides. We intend to use the UC Irvine TRIGA reactor and variations of the Szilard Chalmers method to accomplish part of our goal.
2. Develop a new course combining theoretical and practical studies of detectors for radiation and radioactive materials.
3. Combine efforts from several departments to leverage the formation of a cross-disciplinary program in nuclear science and technology including a minor for undergraduates and a graduate concentration for MS and PhD students.

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